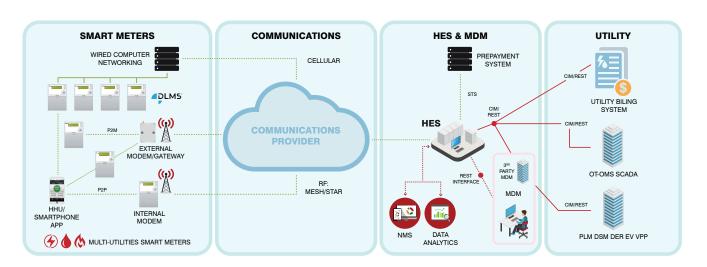






# MIRA HES

On-Premise/Cloud Based Head End System for AMR and AMI Deployments



A complete meter data normalisation and meter management software package which allows the collection of a large amount of data from utility meters or measuring devices in an AMR/AMM/AMI system using various communications technology.

### **Key Features**













## **MIRA HES**

### On-Premise/Cloud Based Head End System for AMR and AMI Deployments

#### **Meter Data**

- · Bi-directional communication
- · Audit trail and event and alarm logging
- Encryption of data for secure communication
- · Setting of smart meter configurable parameters
- · Communication device status and history
- Network information
- Settings of parameters for time of day (TOD/TOU) billing
- · Billing date
- · Clock setting
- · Load curtailment limit current limit, power limit
- · Lock out period for relay
- · Keys setting
- · Dynamic data model
- · Data repository

#### **Command Management**

- · Relay connect/disconnect
- · Meter configuration
- · Commissioning/decommissioning
- · Firmware upgrade
- · Prepayment tokens
- · Clock synchronization

#### **Measured Data Collection**

- Storage and recovery of measured data
- Retrieval of time of use data. The system supports multi-register billing requirements, daily, monthly and three-monthly billing cycles and snapshots and interval values
- Retrieval of interval data including multi-utility consumption data

- · Retrieval of power quality event data
- Retrieval of maximum, minimum and average voltage, current and other electrical quantities

#### **Scheduling**

- Robust scheduling engine to trigger functions via timed schedules, on an ad hoc basis or based on events received from meters
- Supports server or meter initiated connections

#### **B2B** Interface

 Includes file/database export and Application Programming Interface (API)

#### Security

- All data are encrypted using High Level Security (HLS)
- Secure Sockets Layer (SSL) protocol shall be used for IP based connection
- For user interface, web traffic is over https (TLS/SSL encryption over HTTP)

#### Reporting

- · List of devices interactions and exports
- Communication with Data Concentrator Unit and Gateway
- Alarms and Events
- Communication link failure with nodes/end points
- Network failure
- Retry attempts
- Missed periodic reading
- Unlocks all the functionality of the feature rich EDMI Atlas smart meters

#### **Architecture and Performance**

- Supports multiple communications servers load balancing to allow scalability and availability
- Thick and thin clients for supporting multiple concurrent users
- Ability to export data to other systems via file/DB and other standard interfaces
- API's to allow full control of functionality from back office systems
- · Can be tailored to match operational constraints
- Supports both on-premise and cloud-based deployments
- Designed to operate in a utility environment with 24/7 up time
- Capable to integrate with MQTT/JSON/REST
- Support virtual machine, clustering and other HA technology so it can be integrated with the latest DR and business continuity planning

#### **Operating System**

- · Runs on virtual machines
- · Microsoft SQ: server database

#### Hardware

- 38 Virtual machines (minimum)
- 422 GB RAM, 1.9 TB hard disk

#### **Function Overview**

B2B INTERFACE						
TOU	INTERVAL DATA	PQ DATA / EVENTS	DATA MODEL	REPORTING	INFO DISPLAY	
ME	ASURED DATA MANAGEN	IENT	METER DATA			
METER SETUP		FIRMWARE		METER EVENTS		Ŋ
COMMAND MANAGEMENT						SCHEDULING
PROTOCOLS		CONNECTION MANAGEMENT		COMMISSIONING		SCHE
NETWORK MANAGEMENT						
		SECL	JRITY			

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